Icelandic Seafood and Fishing Industry Innovation

N.S.

April // 2015

FIND US AT BOOTH

6127-3 HALL 4 SEAFOOD PROCESSING GLOBAL MAY 6TH - 8TH







dynamics nau

Wise, founded in 1995, has become one of the largest resellers of Dynamics NAV in Iceland as well as offering a wide range of seafood industry-focused packages, business intelligence solutions and analytical tools for the international markets.

Wise solutions combine the best standard Microsoft Dynamics NAV with specialty add-on solutions.

Wise is an Independent Software Vendor (ISV) for Microsoft Dynamics NAV and a Microsoft Gold Partner.



wise bi

Wise BI gives you enhanced capability to monitor and analyse management information in real time. This business analysis environment is specially designed for working with data and distributing valuable information.

Wise Analyzer processes data in real time and can use functionality such as OLAP cubes for multicompany and multidimensional views as well as SSRS reporting package to easily create and view your own reports.

Wise BI solutions simplifies decision making, giving managers an improved overview of their operation.







WiseFish is a tailored ERP solution, developed to meet the needs of the seafood industry. WiseFish covers the whole seafood value chain from fishing and aquaculture through production to sales and distribution.

Whether your company is involved at every step of the seafood value chain or specialized in particular steps, WiseFish is suitable for all types and sizes of seafood businesses.



WiseFish is a certified Microsoft Dynamics solution and has been sold for over 20 years worldwide.





Borgartún 26, 105 Reykjavík Hafnarstræti 93-95, 600 Akureyri tel: +354 545 3200 » wise@wise.is www.wise.is









Flexibility provides the competitive edge

The success of Icelandic fishing companies stems largely from their ability to overcome the natural obstacles that are an integral part of working with wild stocks. There are few examples of a fishing sector that meets the demands of the market in terms of product, long-term reliability of delivery or the standardisation of quality and seasonality in production.

Market-driven industry

There are several factors behind this success. The ITQ system provides opportunities to manage catching, production and marketing in both the long and short term. The transparency of the market allows the full range of data to be available for the entire value chain. The system of shares for fishermen also drives a quality culture.

Real success achieved

Through research, possibilities for further development have beem identified. The key to this is improved handling and better yields. All the development in past years demonstrates that better handling results in higher values for conventional products and gives us the opportunities to develop new ones.

The value of fillets can be increased by placing the emphasis on quality, marketing and product development. There are significant opportunities in the development of items that are at present not fully utilised. This applies both to fish parts currently not used for human consumption, such as offal and skin, as well as species that are today not used for human consumption.



The guick downcooling is what this Optim-Ice® is all about

It is important to cool the catch rapidly in the first hours after it is caught, as this can lengthen the shelf life dramatically

Optim-Ice® is one of the best cooling medium on the market that delivers rapid rate of cooling and at the same time does not bruise or damage the catch. The cooling medium is viscous, consisting of microscopic ice crystals.



Stangarhyl 6 | 110 Reykjavik | Iceland | Tel. +354 587 1300 | Fax. +354 587 1301 | optimar@optimar.is | www.optimar.is

COOLING OF SMALL HADDOCK STORED IN ICE

2 3 Time (hours)

14 12

rature (°C) 8 01 (C)

6

-2

With stocks plentiful in Icelandic waters for centuries, herring quickly became an established part of the Icelandic diet. Originally mainly consumed as salted, boiled or pan fried, herring has for a few generations predominantly been served marinated or pickled on a slice of rye bread. Often accompanied by slices of hard-boiled egg and raw onion, herring is still popular on the local menu but has somewhat lost its appeal to younger generations.

There are records of mackerel fisheries in Icelandic waters, stretching all the way back to 1895. Mackerel invaded Icelandic waters in large shoals in 1944. With limited experience of fishing mackerel and little interest in its consumption at that time, Icelanders were preoccupied with the herring they'd become accustomed to.

The mackerel invasion

Although irregular, whether in timing or in volumes, mackerel became a more frequent visitor to Icelandic waters as the 20th century drew to a close. In 1996, the Directorate of Fisheries for the first time recorded mackerel as a significant catch in its database.

Swimming at similar depth as the herring, the mackerel gradually became impossible to avoid

during herring fisheries. Consequently, Icelandic authorities called for a legitimate share in the mackerel TAC. These calls, however, were completely ignored by other coastal states. Some even openly stated that reports of mackerel fisheries within Iceland's Exclusive Economic Zone (EEZ) were a complete fabrication.

Needless to say, the Icelandic authorities were aggrieved. Hence a turning point in 2005.

That summer Icelandic vessels caught some 36,500 tonnes of mackerel within the EEZ. Mainly caught during an intense early summer frantic feeding period in Iceland's nutrition rich waters, the mackerel's flesh was extremely delicate. Most of the catch was subsequently processed for fish meal and oil production.

Adaptation period

As the total catch escalated year-on-year to the point of 112,000 tonnes in 2008, the industry struggled to adapt to the sheer scale of the catch and its processing. Although an ever larger proportion of the catch was being processed for human consumption, a new species in such abundance within the Icelandic EEZ cried out for specific measures by authorities.



Distributed free at the European Seafood Exposition and Seafood Processing Europe in Brussels in April 2015.

Publisher: Athygli PR

Suðurlandsbraut 30 108 Reykjavík Tel +354 515 5200 Iceland athygli@athygli.is www.athygli.is

Editor:

Sigurður Sverrisson, siggi@athygli.is **Text:** Jóhann Ólafur Halldórsson, Sigurður Sverrisson

.....

Designer: Guðmundur Þorsteinsson

Advertisements: Ingibjörg Ágústsdóttir, inga@athygli.is

Cover photo:

Pelagic fisheries off the Southeast coast of Iceland. Photo taken from Vilhelm Þorsteinsson by Ágúst Þór Bjarnason.

Other photos: Bergþór Gunnlaugsson, Íslandsstofa, Jóhann Ó. Halldórsson, Kristján Maack, Viðar Sigurðsson, Visir hf.

Printing: Oddi





Mackerel makes an impact

As of 2009 there was, however, a radical change in the governing approach. The mackerel fisheries were integrated into the fishing management system with a fixed overall TAC for the mackerel and proportional catch shares. Guidelines were issued as how to chill the catch to preserve its quality and there was a general drive within the industry to maximise the product value.

Pelagic processing revolution

The Icelandic mackerel fisheries advanced in leaps and bounds during the last 5-6 years. The bulk of this fishery now takes place in late summer and into the autumn to optimise the quality of the catch. The initial Olympic approach to the fisheries has been completely abandoned. Simultaneously, the supporting industries have introduced a range of new chilling and processing methods for pelagic fisheries to revolutionise the industry in an incredibly short space of time. In many ways, the mackerel fishery typifies the unpredictability of the Icelandic fishing industry and consequently underlines the vulnerability of a nation so reliant on the industry's revenues. Incentive-driven and ingenious, the fishing industry and its wide range of service industries, have learned to adapt quickly when presented with new opportunities or challenges. This dynamism and flexibility probably best portrays the Icelandic fishing industry and provides it with a competitive cutting edge.

Cool Atlantic

Distributed free at the European Seafood Exposition and Seafood Processing Europe in Brussels 2015, this third issue of Cool Atlantic magazine provides a glimpse of the diversity of the Icelandic fishing industry and the wide range of its service industries.



2014 - A BUSY YEAR LOOKING BACK

For Frost, 2014 was a busy year, as the company worked hard to complete several challenging projects, both on land and on board.

The Skinney-Þinganes pelagic processing plant in Höfn, Iceland, replaced its automatic plate freezers with new automatic freezers from Skaginn, while Frost upgraded the plant's refrigeration system to cope with 800 tons per 24 hours.

During the same period, work began on the new Pelagos plant at Fuglafjørður in the Faroe Islands. Delivered as planned, this pelagic plant was ready for production in August, with a capacity of 600 tons every 24 hours. Moreover, the capacity can feasibly be increased to 1,000 tons per 24 hours.

As for equipping ships, the refrigeration system in the Icelandic factory trawler Skálaberg was upgraded, increasing the cooling capacity.

By mid-summer, work was also completed in Poland on converting two Canadian trawlers from R22 to ammonia.

By the end of the year, Frost had cooperated with 3X Technology to produce a pioneering solution for chilling wet fish. This advanced procedure, an outcome of extensive R&D on the part of 3X, was installed on board the trawler Málmey, which is owned by Fisk Seafood, Iceland. The solution is unique in that the fish is cooled to -1.5°C and stored at that temperature without using ice.

So far, there are all indications that this method will live up to expectations, delivering raw material of superior quality.

Frost has designed and delivered the refrigeration systems for two new factory trawlers built by Tersan Shipyard, Turkey.

Each measuring 86 m long and 16 m wide, the trawlers are equipped with vertical as well as horizontal plate freezers, and have a freezing capacity of 100 tons per day.

2015 - STAYING BUSY GOING FORWARD

In February 2015, Kirkella H7 became the first trawler to be outfitted by Frost for UK Fisheries, Hull. UK Fisheries is jointly owned by Samherji and Parlevliet & Van der Plas.

Yet a second trawler will be outfitted in May for a German company which is also in the ownership of Parlevliet & Van der Plas.

As evidenced by the above, Frost's 2015 prospects are already highly promising.

Furthermore, work is currently starting on a new blast freezer for the Faroese salmon farming company Luna, perhaps better known as Hidden Fjord, Luna's brand name for quality farmed salmon.

A contract has been signed with Eimskip to design and deliver the refrigerating and air-drying system for a new 10,000-ton cold store.

To be built in Hafnarfjörður, Iceland, the cold store is being commissioned in two stages: the first half late next summer and the second half a few months later.

Both the refrigerating and air-drying systems will be similar to those provided in 2013 by Frost for HB Grandi's 6,000-ton cold store, nicknamed the "Polar Bear".

According to Guðmundur Hannesson, the Frost sales and marketing manager, a number of further offers have been made for undertaking minor as well as major projects. "Thus it looks as though 2015 will be yet another busy year for Frost, with lots of interesting projects".

Please visit our website: www.frost.is



DESIGN, SUPPLY, INSTALLATION AND SERVICE OF ONBOARD AND LAND BASED REFRIGERATION SYSTEMS.

Refrigeration systems: For more than two decades FROST has been designing and installing onboard and land based refrigeration systems. All our systems are approved by the vessels classification society.

Service: The company designs, supplies equipment and installs new refrigeration systems as well as servicing existing systems. FROST offers its customers the service of experienced engineers for troubleshooting and upgrading of existing systems, or for specifying and designing new systems.

About FROST: FROST is by far the largest company of its kind in Iceland with its headquarters in Akureyri northern Iceland and an affiliate in the Reykjavík area. The company has taken on projects all around Iceland as well as abroad. Projects abroad have been a growing part of our operation with projects in 13 countries in 4 continents last year alone.

FROST works according to ISO 9001.

FROST has, last several years, been recognized as one of Iceland's strongest companies by CREDITINFO.



frost@frost.is www.frost.is



Kælismiðjan Frost ehf. Fjölnisgata 4b, 603 Akureyri Sími +354 464 9400 Fax +354 464 9401

Kælismiðjan Frost ehf. Lyngás 20, 210 Garðabæ Sími +354 464 9400 Fax +354 464 9402

Superchilled fish without any ice!

Saudárkrókur company FISK Seafood's stern trawler Málmey SK-1 has recently been converted from a factory vessel to a fresher trawler. What has been done with Málmey is unique in that for the first time the use of ice to cool the catch is not part of the equation. Málmey is fitted with a production and chilling system developed and manufactured by sister companies Skaginn in Akranes and 3X Technology in Ísafjördur, with the fish chilled to a temperature of -1°C before being transferred to the fishroom.

According to Ingólfur Árnason, managing director of both Skaginn and 3X, there are some very significant steps being taken in the development of groundfish processing in Iceland that are of much the same magnitude as the changes that have already been taking place in pelagic handling in recent years. He said that superchilling at sea creates a wealth of opportunities for production ashore.

The companies working together on this have been able to co-operate closely, combining the superchilling technology that Skaginn has developed in recent years for fillet production with the Rotex rotary bleeding and cooling tanks for fishing vessels that are a 3X Technology development.

Three step process

The production process on board Málmey begins with fish taken from the pounds to be gutted in the usual way, with the exception that all of the livers are separated and follow a special cooling route before being stored in the fishroom. The same applies to roes during the spawning season. Each gutted fish is washed individually and passes from that to a conveyor with automatic image analysis that grades each fish by species and weight.

There are three Rotex tanks on the processing deck, each fourteen metres long. Each of these is constructed around a screw that turns slowly, and is capable of holding up to 3000kg of fish in each compartment, along with a blend of sea water and saline solution, with each tank divided into three sections. The first section, which receives the fish following image analysis, is a bleeding tank and fish pass through this during a fifteen minute process. The screw moves the fish along to spend thirty minutes in a chiller compartment and then to the last section where there there is

Ingólfur Árnason, managing director of Skaginn and 3X Technology, is convinced that new opportunities are opening for groundfish processing that are on a par with those that have taken place in pelagic processing in recent years. a temperature of -4°C. This is the superchilling that takes place over fifteen minutes, with the fish emerging at a temperature of -1 to -1.20°C. Overall the fish spend an hour going through the washing and cooling process, with a conveyor taking the fish away and placing it on a chute leading to the fishroom where crew place the fish in tubs. The three tanks can hold up to ten tonnes of fish at a time if required.

A picture of every fish!

Fishroom chilling is designed to maintain the steady temperature at which the fish leave superchilling once they are in the fishroom, all the way to the end of the trip. This is done with batches of 300kg passing through the system, and this is also a suitable amount of fish for each of the 460 litre tubs used in the fishroom.

The imaging technology is a key part of the process. This scans and analyses each fish for species and weight, and based on the information gained, fish are routed to particular tanks and sections. This makes it possible to batch species and grades, while ensuring that the 300kg batch size is kept to throughout. The system stores a picture of each individual fish, and with each tub on board numbered, information on any part of the catch can be retrieved if necessary.

MÁLMEY

MALMEY SK 1

Málmey was built as a freezer trawler in 1987 and was originally Sjóli HF-1. It was sold to Fiskiðan Skagfirðinga in 1995 and renamed Málmey SK-1.

Using the fish for self-cooling

Skaginn and 3X managing director Ingólfur Árnason said that the key feature of the system on board Málmey is quality and speed of production. The concept of superchilling utilises to the full the liquids in the fish themselves.

'Fish are naturally composed to an extent of water, so we decided to make the fullest use of that for cooling. We have the change of state that occurs when a fluid goes from a liquid to a solid state and in fish this occurs at -0.90°C. By thickening the liquid in the fish themselves in this way we are producing a cooling agent that replaces the ice that we are accustomed to using' Ingólfur Árnason said, commenting that the fishroom on board Málmey is fitted out on conventional lines, with the exception of there being no need for layers of ice as the fish are arranged in tubs.

Better skinning and filleting

Ingólfur Árnason said that the layout of the vessel dictates the possibility of installing such a system on board, as has been done with Málmey, and he added that the best option is for an installation on board a new vessel, as is planned for FISK Seafood's planned newbuilding and the three newbuildings for HB Grandi. Contracts for systems from Skaginn and 3X Technology have already been signed for HB Grandi vessels.





Visit our website: www.skaginn.is

SAN

sam

This is where the cooling process starts. Fish are graded into tank sections after passing through image analysis that grades it according to species and weight. A one-hour process takes the fish through the tanks.



10



There are three 14m long tanks on Málmey's processing deck through which the fish are gradually cooled to -1 to -1.20°C. Supercooling takes place in these tanks and each 300 kg batch of fish is then transferred to the fishroom.



The Rotex tanks are filled with a blend of sea water and saline solution and the cooling is managed by the system. Each section holds a 300 kg batch of fish. The fish are bled in the first stage, before the cooling and finally the supercooling stages in fluid at -4°C for a 15 minute period. 'The theme that runs through our development work is the aim to achieve better quality fish and longer storage times. All the research indicates that improving handling and cooling the fish immediately after gutting leads to better yields in fillet production. The next step in development is to reduce the quality faults in filleting and skinning at the processing stage. This is where the key to future of technology in shore processing of groundfish. This is where we see the difference today between groundfish and pelagic processing. All groundfish fillets have to be passed along a trimming line, but we are aiming at achieving as level of technological expertise that allows the majority of fillets to go directly from the filleting machine to water jet cutting where backbones are cut out and each fillet is portioned as production requires.'

A new age of groundfish processing

Ingólfur Árnason said that there is a great deal of interest in these development from the Icelandic seafood sector, with both groundfish and pelagic companies keenly aware of just how great an advantage technology has returned to the pelagic sector in recent years.

There are admittedly fewer jobs today in pelagic processing compared to the previous situation, but those jobs are higher-paid ones. Our vision for the future at Skaginn and 3X Technology is therefore to concentrate on skinning and filleting that can bring those same advantages to groundfish as they have already brought to pelagic processing. Within our two companies we have everything needed; filleting machines, skinning machines and development of water jet cutting technology, but the crucial factor behind all of this is the success we have achieved through supercooling raw material.

We see this as a complete process and intend to concentrate on every step of it, from the fish pounds to packing the finished product,' he said, adding that new opportunities opened up when Skaginn and 3X Technology came under common ownership. As a result of the change in 3X Technology's ownership, it was possible to combine the expertise of both companies and the solutions they had developed individually. In addition, the companies have been sponsored in carrying out research by research companies Matís and Iceprotein that have subsequently acquired some in-depth knowledge of supercooling raw material at the first stage of processing.

New benchmarks in processing

'FISK Seafood took an important step by commissioning the refit of Málmey and providing an opportunity to test what research had already shown us. So Málmey will be less a fresher trawler for its first few months as a test bench as we monitor the project's progress. I'm convinced that in what we have done on Málmey we are going to see some real gains in fish processing expertise that set new benchmarks in groundfish processing. But this kind of thing doesn't happen unless companies like FISK Seafood have the courage and the imagination to change and make the most of the opportunities technology offers,' Ingólfur Árnason said.

THE FISH STORY FLYES

The Iceland Responsible Fisheries programme highlights the origin of seafood products from Iceland and well managed fisheries in Icelandic waters.



Seafood is our heritage, our livelihood and our future. Conservation and sustainable use of marine resources is at the very heart of fisheries management in Iceland. ******

On Cloud Nine with WiseFish

Hallgerdur Jóna Elvarsdóttir, WiseFish Sales manager, Jóhann Ófeigsson, Team Leader of Service and Consultancy and Jón Heidar Pálsson, VP Sales & Marketing.



Wise is now able to offer WiseFish and Microsoft Dynamics NAV in the cloud so you can access and process data anytime, anywhere, from any device using a secure web-based environment. WiseFish, built-on Microsoft's Dynamics NAV is the most sophisticated solution available for the seafood industry. This is a solution that suits every aspect of the production chain from catching to production to exports, streamlining system management and minimising the need for hardware.

'This system is ideal for every type of seafood as well as other business sectors. It encompasses the requirements of aquaculture, catching, production, traceability, contracting, transport, sales, costing, quality control, and stock management to provide a complete solution for anyone working with seafood in whatever capacity,' said Wise's sales and marketing manager Jón Heidar Pálsson. running costs, making this available to companies of any size. This applies to aquaculture or export companies, fishing operators or producers, as all of these have to meet the same requirements for certification, export documentation, electronic accounting, quality and traceability.'

cloud environment minimises start-up and

WiseFish offers a subscription-based option that includes Dynamics NAV, providing a flexible solution with known costs and the possibility of varying the number of users as required each month, allowing the licence to be reduced or increased according to changing demand.

Elements of WiseFish available include the Dynamics NAV accounting and management system, links to Fishtalk and FarmControl production system for aquaculture, quota management for fishing companies, along with a payroll, contracting and export system.



12



Flexibility is the key 'Leasing the software and running it in a



Also on offer are production management tools, providing a raw material overview and production costs at every stage, a contracting system that gives the user a complete overview of sales costs and product distribution, and a quality control system with full traceability of products, packaging and transport units. The transport and loading system tracks and monitors delivery, loading and shipment units. An optional link-up with Marel's Innova is available and WiseAnalyzer provides an analysis tool for managers with possibilities for producing reports and access to stock data.

Faster, simpler and more user-friendly The main innovations from WiseFish and Dynamics NAV 2015 include a more powerful and user-friendly interface, as well as a simpler and faster system with enhanced search capabilities. Its web interface has been upgraded and it functions on most tablet computers with more opportunities for access at any time, wherever the user is located. Personalized home pages let you view your most important business data and key performance indicators at a glance. Sophisticated colour coding and live data alerts help users prioritize actions and stay productive. Integration with Office has been enhanced, and there are improved possibilities for using the system with emerging technology. Crucially, it also offers help in deciding product sales prices and optimum production and sales channels.

WiseFish has passed Microsoft's stringent certification process, meaning we have met Microsoft's highest standards for Dynamics NAV implementations. WiseFish has been a solution since 1995 and has been developed to meet the requirements a changing business environment in the intervening years, not least with the advent of Dynamics NAV, integration and a demanding market that calls for increasingly sophisticated support.

More than 80% of all fish quotas in Iceland pass through a WiseFish system in one way or another while on the international market Wise is active all over the world, providing services to fishing companies of every size and specialisation.

Decades of experience

Wise has at its disposal the skills of a team that has decades of experience with Microsoft solutions behind it. In addition, the company has a long record of experience in providing tailor-made solutions for a great many Icelandic companies as well as for its customers around the world.

Wise is one of Iceland's leaders in information technology, with its systems in use by many of Iceland's largest seafood companies. Wise specialises in consultancy, software engineering and software solutions, combined with a personal approach to service. It offers a variety of software packages based on its philosophy of making it possible for its customers to make their own informed decisions, and has become one of Iceland's prime Microsoft Dynamics NAV resellers, specialising in servicing the financial, retail, local government, seafood and transport sectors. Wise has a staff of over 80, based in Iceland, Norway and Canada.



Showcasing in Brussels

X-Ray Cutting Machine

Valka will showcase the X-Ray Guided Cutting Machine in Brussels in 6-8 May.

The machine uses combination of an X-ray and 3D image processing system together with robot controlled water jets to locate and cut pin bone and portions with great accuracy.

This gives processors an opportunity to substantially improve throughput and yield using fewer workers when trimming and portioning fish fillets.

Pre-trimming line

With speed controlled filleting machines the system ensures that each trimmer has only few fillets at a time and the first fillet in goes first out.

66 Minimum handling and short processing time returns excellent material quality

"We use the Valka Cutting machine to cut out pin bones and portions from skin-on and skinless Haddock and Cod fillets. We are very pleased with the performance and the flexibility that the machine gives us.

Gunnar Holm - Sales manager Andreassen Sales AS Co owner of Gryllefjord Seafood AS

Pre-trim

Remove blood stains & spots, parasites & filleting defects



X-Ray Scan

X-ray camera scans the fillet and locates the bones



Measuring

Vision system measures the fillet density for cutting based on weight



X-Ray

The X-ray system uses low energy X-ray technology which gives the highest contrast possible and more reliable detection of small bones than with conventional technology.

MEET US IN BRUSSELS

at Seafood Processing Global

> April 21-23 Booth #675

the machine in action

Scan to see



Key Features

- X-ray camera detects bones down to 0.2mm in size
- Automatically cuts out pin bone and to the desired portions
- Greatly improves product handling as all cuts are made in a single machine
- Ensures bone-free products

Capacity & yield

The machine belt speed can be up to 460 mm/sec. The throughput of the machine is calculated as a function of the weight of the whole fish. For a 3 kg gutted Cod the machine capacity is about 2.000 kg per hour.

The pin bone cut-off in Cod is around 5-6% of the fillet size. The cutting proximity to the bones can be adjusted to cut closer and hence increase the yield and furthermore the expected yield will increase when cutting at an angle is available.

Portion Calculation

Analysis software calculates the optimal portioning



Water Cut

Water jets cut out the pin bone and portions



B Valka





CATCHING FISH IN HARMONY WITH NATURE

With our own vessels and our own production we bring our partners high quality Icelandic fish products, caught and cared for in harmony with nature.













GOING TO BRUSSELS?

VISIT US AT OUR NEW STAND HALL 7, BOOTH 1553

www.hbgrandi.com/expo



www.hbgrandi.com

Celiktrans to deliver five new fishing vessels for HB Grandi



Contract between HB Grandi and Celiktrans Shipyard signed. Seated from left: Kristján Loftsson, Chairman of the Board at HB Grandi and Ahmet Otkur, General Manager of Celiktrans. Standing from left: Vilhjálmur Vilhjálmsson, CEO of HB Grandi and Volkan Urun, Business Development Manager of Celiktrans. "We are co-operative, flexible, straightforward and competitive, but more importantly we have the know-how to build fishing vessels. In brief: We build, you fish," commented Volkan Urun, Business Development Manager of Celiktrans Shipyard in Turkey, on a recent agreement with fishing industry leaders in Iceland, HB Grandi, for the construction of three new wet fish trawlers as part of the company's overhaul of its fleet. Previously, HB Grandi had contracted Celiktrans to build two new pelagic vessels. One (Venus) will be delivered this month and the other (Vikingur) at the end of 2015.

Iceland breakthrough via Norway

When the Celiktrans Shipyard in Turkey sold its first fishing vessel to Norway, they probably never envisaged how that particular transaction would later create major business opportunities for them in Iceland. As it happened, their first vessel delivered to Norway in 2012, Malene S, was sold to Iceland and became Börkur NK. When Celiktrans' second fishing vessel also found its way to Iceland, again via Norway, eyebrows were raised. The sleek and modern design of Sigurdur VE provided the breakthrough in Iceland.

The new HB Grandi wet fish trawlers will enjoy the benefit of several features to optimise operation by using a floating frequency, and an increased safety with its unique cargo handling system.

Celiktrans' biggest project

Founded in 1958, Celiktrans Shipyard has delivered close to 50 vessels of all types and sizes, from tugboats to passenger ferries, mainly for domestic use. Since 2003 Celiktrans Shipyard has delivered turn-key projects with a clear focus on the fishing industry for the last five years. Volkan Urun confirms that the five vessel agreement with HB Grandi is the biggest project the 57 year old company has undertaken through one owner. "The contract is unique but so are Icelanders," added Volkan Urun.

He praises the collaboration with Nautic, the HB Grandi vessels designer, and he hopes it expands even further. "We hope to reach more fishing families in Iceland. I prefer to call them families rather than companies as you spend so much time with them that they almost become family," says Volkan Urun and concludes: "Icelanders are proving to be good "relatives".



NAUTIC

A bold statement by NAUTIC chief designer Alfred Tulinius on the expectations to their most recent and what some might say odd looking wet fish trawler design. The lcelandic-based design company has been awarded a contract to design a new generation of wet fish trawlers for HB Grandi, lceland's largest fishing company. Three vessels are already lined up for production at the Celiktrans shipyard in Turkey.

"We had been anticipating the industry to commence with an update of the ageing lcelandic wet fish trawler fleet. Our mind was set on facilitating the matter of laying the fish into the tubs at upper level in the vessel for improved working conditions and coherent handling – with all fish laying straight, gutted with open belly down – eliminating accumulation and fouling of water inside and providing an almost "straight" rigor position of the fish. This enhances quality and increases yield during processing." says Tulinius.

As the whole fish hold operation will become fully automated, one of the riskiest

of jobs on board a wet fish trawler have been completely eliminated thus greatly enhancing the safety of the crew.

Asked about the odd looking nose the designer replies: "The shape of the nose is an energy-saving design to ease the movements of the vessel and frontal impact when it heads on into the waves, allowing for smoother diving rather than safeguarding by force." And Tulinius adds:

"As designers, I tend to think we add to the concept of responsible fisheries with a meaningful input in our field of expertise by facilitating energy and fuel savings, greatly reduced CO₂ emission, elimination of hazardous jobs while enhancing quality handling of the raw material. I firmly believe our client, HB Grandi, has made a serious investment through a responsible and advanced development of their wet fish operation and I genuinely congratulate them on this bold move into the future," concludes Alfred Tulinius.

Catch him at the Brussels show for a chat by calling him on mobile +3546600522.

Samhentir – all-round solutions for recyclable packaging

Packaging is a crucial factor in maintaining quality all the way to the customer when handling and transporting fresh seafood, and care is of vital importance. Icelandic packaging specialist Samhentir offers seafood producers a range of suitable solutions for packaging, including providing the option of recyclable packaging that is now becoming increasingly popular. In addition to its activities in Iceland, Samhentir owns half-shares in partner companies Vest-Pack in the Faroe Islands and Tri-Pack in the UK.

In recent years the demand for automation in packaging has grown noticeably quickly. These are particularly suitable for processing and packing of pelagic fish. Samhentir offers various specialised packaging lines for pelagic factories that are being refurbished with new production lines. Equipment from Samhentir is a part of the production facilities at the new pelagic factory opened last year in the Faroe Islands.

This year Samhentir will install a new

packaging line at HB Grandi in Vopnafjordur in Northeast Iceland. The line is fed by whole fish. It automatically opens boxes, weighs fish and places into boxes before sealing, strapping and stacking on racks. After freezing the racks are automatically unloaded and the boxes stacked onto pallets. It gives us great pleasure that HB Grandi chose a packaging line from Samhentir and First Process for its pelagic production.

During the 19 years that Samhentir has been in existence, the company has established itself in a leading position on the market for packaging and other equipment. Although the seafood business has been at the core of its activities, Samhentir also has a solid customer base among most other industry sectors. The company is able to deliver boxes, cartons, bags, paper, plastic, tape and a variety of other good direct from its own storage facility.





20

PACKAGING MATERIAL IS OUR BUSINESS



Samhentir does also supply various packaging solutions for food industry and processing equipment for the meat industry.

We have expanded our service department in order to meet increasing demand for servicing all type of machines.

LABELS PLASTIC CARDS TICKETS AND MUCH Mackrel weighing, packing and stacking line for HB Grandi, Vopnafjordur, to be installed 2015



FIRST PROCESS

Superchilling is the future

Matís researches the effects of superchilling on salmon and groundfish in a Nordic Marine Innovation 2.0 Project funded by Nordic Innovation with Norwegian leader and Icelandic, Danish and Finnish participation.



Gunnar Thórdarson, Matís Regional Manager in Ísafjörður. 'Research has shown us that superchilling can significantly improve the quality of seafood products, both lifting quality and improving yields in production, extending the shelf life of finished products, and much more. In other words, we could be talking about new products with hitherto unknown characteristics. There are many aspects of this that we have yet to investigate but I would hope that by the middle of 2016 we will have final results, as well as a clearer idea of the characteristics of products from superchilled raw material,' said Gunnar Thórdarson, Matís's Regional Manager in Ísafjördur.

For the last year Matís has been leading research in Iceland into the use of superchilling in catching and processing. The concept has its roots in the success of cooling mackerel caught during the summer fishery, a technique that has been the backbone of land-based mackerel production. On this basis, Matís embarked on research into supercooling in groundfish catching and processing, in co-operation with equipment

manufacturers, fishing operators and other research bodies.

Serious gains to be made

The concept of superchilling takes raw material through several steps to be cooled to a temperature of -0.8°C.



Superchilled cod fillet.

Research so far indicates that this process has a significant effect on rigor mortis and the firmness of the meat, both of which are vital factors for quality during production, filleting and yield, as well as on product shelf life.

One Icelandic trawler has been been refitted with specialised equipment for superchilling the catch on board, eliminating the need for ice to cool the fish. The same approach is being used in superchilling trials on small boats and Matís is involved with research into both the effects of superchilling in fresh production as well as in exports in which fish are shipped to overseas customers without ice.

'The main potential we see is in production and exports of fresh fillets and fillet products, which is a growing part of the Icelandic fishing sector. This is fascinating research and there is a great deal to be gained here,' Gunnar Thórdarson said.

To notice value

where others cannot, is one of human's most valuable talent. Our role is to make it easier, for those who are gifted with such a talent, to develop it, provide them with further assistance and help them execute, for the good of the community as a whole.



Matís is an independent research institute which strives toward innovation in the food industry, biotechnology and food security www.matis.is Marel Brings Technology to the Heart of Fish Processing Facilities





marel.com/fish - marel.com/fleXicut



Marel's FleXicut provides automatic bone detection and water-jet removal of pinbones with a neat footprint and a range of benefits, including greater product diversity, and higher yield and throughput.

Impact across the Whole Processing Line

Equipped with high resolution X-ray and water-jet cutters, Marel's FleXicut incorporates two critical processing steps in one machine: precisely locating the pinbones and then cutting the fillet to remove them. FleXicut can also divide the loin, cut the belly flap or tail, or portion the fish to customer specifications, skin-on or skin-off.

FleXicut is easily integrated into most existing factory layouts, and is the key element of the next generation of processing systems that will transform the whole processing floor. "The high level of technology and automation that this development brings us transforms the very nature of fish processing," says Gudbjorg Heida Gudmundsdottir, Project Manager at Marel.

The precision of the machine's cuts returns on average a greater yield than is possible with manual trimming, as well as ensuring uniformity in the cut and the size of pieces.

"We are bringing hi-tech to the heart of the fish processing factory and this will influence the entire process," says Gudmundsdottir. "This is one of the biggest steps towards automation that we've seen for a very long time in fish processing."

A Wider Range of End Products

The loin is the most valuable part of the fillet and so it's crucial for processors to make the most use of it, cutting as close to the bone frame as possible. There are many ways to use the fillet, and FleXicut can make an intelligent decision on how to divide the fillet, taking into account the weight and shape of the fish being processed at the time, as well as customer parameters on yield.

The variety in the range of possible cuts is one of the biggest benefits of the machine, as it helps processors maximize the value of the raw material and adjust cutting to meet orders each day, regardless of whether fillets are large or small.

"FleXicut utilizes fillets of all sizes very well," says Gudmundsdottir, "and when we're talking about facilities that process dozens of tons per day, this quickly adds up to significant gains in yield, which translates into significant profits for the processor." An even greater variety of products is made possible as FleXicut can be used for skin-on fillets. This opens up the prospect of producing skin-on products such as skin-on loin and skin-on smart fillets.

Getting Closer to Boneless Fillets

The FleXicut's X-ray can detect pinbones that might otherwise slip through manual trimming, significantly decreasing the bone ratio in the fillet.

As Gudmundsdottir explains, "Producing boneless fillets is one of our goals as we continue to develop the whitefish systems in coming years."

Taking Fish Processing into the Future

The FleXicut is the heart of the next generation of whitefish processing and the development of the whole system is driven by the technology of the water-jet cutter. Marel first introduced FleXicut early in 2014 and has come a long way towards developing the new generation processing flowlines, which are expected to be released by the end of this year.

"FleXicut runs with Innova, and even more opportunities are expected to open up as we further develop the software for this new line - such as full traceability through the system, and integrated stock and order management" says Gudmundsdottir.

Marel has already developed a product distribution system located after the FleXicut. These developments have been made possible thanks largely to Marel's close partnerships with fish processors.

"We regard this as a journey into the future with our customers," says Gudmundsdottir. "It's very important for us to be able to work so closely with the fish industry in further developing the technology that already enables higher yield, a greater variety in endproducts, and better quality."

"Marel has a big team working on this project that has been following FleXicut through development and implementation, first in Iceland and Norway, and will continue to do so as the machine is installed in nearby whitefish markets such as Denmark, the UK and Canada, and then more widely. Strong partnerships with our customers are the bedrock of this new generation of whitefish processing equipment."

25



Don't waste fuel producing more electricity than you need.

ElCorrect™ Power Quality Filters

For almost two decades we have been solely focused on energy technologies. Our product, the ElCorrect[™], is a revolutionary energy saving technology, built to withstand tough environmental conditions but is in itself maintainance free.

Waisting fuel on producing electric not needed?

Low Power Factor means both waste of fuel and damage in your electrical systems.

Long term affects of ElCorrect[™] are reduced maintainance cost, lower energy consumption and increased operational efficiency and stability.

The Technology

The ElCorrectTM system is an electric power quality correction unit that reduces interferences and distortions in electrical systems, wether they are an ocean going vessel or larger scale manufacturing plant.

The technology has shown to be effective in reducing energy consumption and maintainance cost, and in addition, it reduces your overall carbon footprint.

Key benefits and features;

- \checkmark Power Factor raised to maximum
- \checkmark Minimal maintainance
- \checkmark Up to 10% fuel savings
- ✓ Less downtime
- $\checkmark \quad {\sf Operational\ security}$
- \checkmark Harmonic frequencies fluctations reduction
- ✓ Lower Carbon Footprint*
- √ Green solution

*The amount of CO2 released in 1 tonne of fossil fuel is 2,25 tons. By reducing your fuel consumption you reduce your CO2 emissions and related costs.

Who are ElCorrect[™] users?

ElCorrect[™] is used both onshore and offshore around the world in various industries. Among our clients in the seafood industry are Alyeska- Trident- and Icicle Seafoods Inc. in USA, Samherji in Iceland and others.

Contact us for more information.



Skutahraun 2 - Box 415 - 220 Hafnarfjordur - Tel: +354 462 6400 E-mail: ee@rafehf.is - Mobile: +354 892 5057







Visit **www.rafehf.is** for more information



OFFERS **OUTSTANDING** SOLUTIONS WITH INCREASED **PROFITS**

INJECTION SYSTEM

A COMPREHENSIVE SOLUTION OFFERS GREAT BENEFITS

PRECISE MANAGEMENT -BETTER YIELDS

the Raf-S900 injection system incorporates all the advantages of an injection machine, brine blending, brine production and production management.



RAF ehf. / Óseyri 6, 603 Akureyri , Iceland / tel: +354 462 6400 / raf@rafehf.is / www.rafehf.is

CURIO HAS MANUFACTURED SEAFOOD PROCESSING **MACHINES SINCE 1994**





The new C2011 whitefish filleting machine offers a high and consistent yield, achieved by a robust and reliable design specific for whitefish processing. Simple user interface allows the operator to easily switch between different species, select different range settings, adjust the machine speed and operate the machine safely. Opening the safeguards provides a clear and easy access to the machine internals, minimizing the time required for daily maintenance, cleaning and repair work. Automatic lubrication system ensures that all critical parts are well lubricated, reducing repair and maintenance work while providing a reliable and safe operation. Stainless steel trays, adjustable guides and flexible cutting mechanism ensure high and consistent yield and throughput. All materials used, in direct contact with the processed fish have been carefully selected to be approved for food processing.

The skinning machines in lines C2030 and C2031 are the latest processing equipment in Curio's production. They are designed for the processing of all whitefish and salmon and at Curio we build and deliver a new skinning machine every other week. The machines consist of approx. 1000 machine parts. Most of the parts are made of stainless steel, but others are made of corrosion-resistant plastic. The main objective of the skinning machine design is to remove the fish skin in a sensitive manner. We employ various technologies to keep the fillets firm throughout the process and the end result is therefore a beautiful texture of the processed fish.





SKINNING MACHINE

C-2030

Length: 200 mm

With: 170 mm Height: 150 mm







he C-3027 Heading machine is specifically designed for heading of white fish such as cod, haddock, saithe and other similar fish. Simple user interface allows the operator to easily switch between different species, select different range sett- ings, adjust the machine speed and operate the machine safely. Opening the safeguards provides a clear and easy access to the machine internals, minimizing the time required for daily maintenance, cleaning and repair work. Automatic lubricationsystem ensures that all critical parts are well lubricated, reducing repair and maintenance work while providing a reliable and safe operation. Stainless steel trays, adjustable guides and flexible cutting mechanism en- sure high and consistent yield and throughput. All materials used, in direct contact with the processed fish have been carefully selected to be approved for food processing.

KNIFE SHARPENING

C-2015

Length: 900 mm With: 740 mm Height: 800 mm Weight: 100 kg

The C2015 knife sharpening machine offers a simple and effective way to sharpen various sizes of circular knives for fish processing machines. Simple user interface allows the user to easily start and stop the machine as well as adjust the knife rotational speed. LED lighting lights up the work area giving the operator clear view of the blade edge, making it easy to fine tune the settings. Stainless Steel frame, tray, covers and guides ensure a reliable, sturdy and consistent sharpening while at the same time making the machine easy to clean and maintain. All materials used in the construction of the machine have been carefully selected to be approved for food processing.

MINIMUM WASTE AND MAXIMUM PROFITABILITY



Curio ehf. / Eyrartröð 4 / 220 Hafnarfirði / Tel: +354 587 4040 / e-mail: curio@curio.is

Traditional fish drying modernised with the otherma

Drying fish is a practice Icelanders have mastered through the ages as an efficient way of preserving food. With the right conditions, dried fish can be stored for years without losing its quality. During the process, the fish retains its nutritional values, proteins and vitamins despite losing up to 80% of its original weight when dried.

Haustak is a fish drying plant that benefits from the rich geothermal energy fields found nearby on the Reykjanes peninsula. A joint venture of two of Iceland's leading fisheries companies, the Grindavik based Visir and Thorbjorn, Haustak has developed a method to harness this natural energy for a speedier drying process without risking any of the product's quality.

Preserving food freshness

The new 60 x 40 fillet boxes from Promens Tempra are more efficient, stronger and provide longer shelf life

The new 10, 13 and 15 kg box-line is designed to maintain freshness of food longer than comparable packaging.

Advantages of the new boxes are the following:

- * increased length and capacity lead to better treatment of products
- Iong fillets fit easily within the box
- more space for ice or ice packs
- box size is 60 x 40 cm, with better pallet stackability
- new design of the corners makes boxes stronger than before
- # increased box strength allows higher pallet level
- better insulation achieved with denser stacking on pallets
- rounded corners increase insulation and extend product shelf life

With the Tempra fillet boxes Icelandic fish can now be delivered fresher than ever to consumers worldwide.



Fish Temperature (°C) 5 mm above the bottom of the new 60x40 cm 10 kg box after 6 hours at 20°C ambient temperature



tempra

PROMENS tembre



PROMENS TEMPRA EHF • Íshella 8 • 221 Hafnarfjörður • Iceland • Tel: +354 520 5400 • tempra@promens.com



The plant has subsequently provided opportunities for the drying of a range of species that had previously been deemed unfit for the process, such as haddock, ling, saithe, tusk and skate. As a result, the company's product output has seen a significant increase and is now annually measured in thousands of tonnes. While the bulk of Haustak's products is processed through the technically enhanced drying plant, there's still a market demand for products dried the oldfashioned way. In the heart of winter, fish is still hung onto the wooden racks by the shore for a natural drying process aided by the prevailing winter breeze (see photo).



Staying stable with the anti-



Hornafjördur, home of Vélsmidjan Foss, is a bustling fishing town on the Southeast coast of Iceland.

Photo: Kristján Maack.

Albert Sveinsson, skipper of Faxi RE-9: Unbelievable improvement in the ship's behaviour

Skipper Albert Sveinsson on Faxi RE-9 said that there is no doubt that the addition of an anti-roll tank has improved the ship's behaviour. 'The change is unbelievable after we had the anti-roll tank fitted before the mackerel season in 2013,' he said, commenting that the changes were noticeable immediately. Before, the crew often slept badly and were tired during long spells of poor weather.

'We gave it a good testing during that first trip. The weather was rough and we steamed to the fishing grounds with the wind astern. I remember waking up after a good night's sleep the next morning and reckoned that the weather must have improved during the night, but when I went up to the wheelhouse I could see that the weather was still as foul as it had been but the boat hardly moved.'



Faxi RE-9 has an anti-roll tank supplied by Vélsmidjan Foss.

-roll tanks from **Foss**

Hornafjördur company Vélsmidjan Foss has built up a reputation for the anti-roll tanks it produces for subsidiary company Rolling ehf, which Foss established with naval architect Stefán Gudgeirsson and engineering consultancy Verkís, specifically to develop, produce and promote this technology.

One of Rolling's anti-roll tanks have been fitted to freezer trawler Örfirisey RE-4, operated by one of Iceland's leading fishing companies, HB Grandi. Similar tanks had previously been fitted to three other HB Grandi vessels, pelagic catchers Lundey NS-14 and Faxi RE-9 and freezer trawler Venus HF-519.

'The skippers' positive experience with these tanks is the best advertisement we could have,' said Ari Jónsson, managing director of Vélsmidjan Foss, commenting that the anti-roll technology makes a significant difference to a fishing vessel, both for the crew and not least for the catch and handling. 'This applies particularly to pelagic vessels that are increasingly landing for human consumption. Ensuring minimal movement of the catch in the tanks is an important part of ensuring quality is maintained.'

On pelagic vessels the anti-roll tanks are fitted on the whaleback and on trawlers forward of the wheelhouse. Each tank consists of a series of vents and the Stability Watch control management system developed by Verkís which controls the tank's activity. 'We build the tanks here and then there's the work of installing them on board,' Ari Jónsson said, adding that as well as the deliveries to Icelandic vessels, an anti-roll system has also been supplied to a customer in Australia.





Operator Panel

The winches are compact and light compared to their power. The operator panel shows pressure in the system, velocity, length of wire/rope in the sea etc.

Vélsm. Foss ehf.

www.fossehf.is ari@fossehf.is

Sensore

that make sense

TSO22**M**



Fuel Savings

Fuel is black gold these days of volatile fuel prices and burning fuel without needing to hurts. Marport gear sensors are designed to play a role as a contributing factor in maximising efficiency, targeting fishing at the most productive spots and keeping fishing time to the minimum needed to fill the fishroom while keeping your fuel bills down

Efficiency

Time is money, and cutting down on lost time and wasted effort is the key to streamlining any fishing operation. The better the sensors on the gear and the more detailed the information reaching the skipper, the shorter the time the fishing gear has to be in the water. Our aim is to provide the essential information to keep fishing time strictly to the time needed, without wasting time or effort.

Catch Quality

Short tows are the thing. Getting the fish from the water to the fishroom as fast and as fresh as possible it what keeps quality high and prices strong. Marport's codend sensors aim to tell you when there's just enough fish in the gear for a prime quality haul, without needing to tow that extra half-hour to be sure.

Sustainability

In today's world sustainability has become more than simply a buzzword; it's an essential aspect of modern fisheries. Today's approach is to take what you need and leave the rest. Nobody wants to slaughter any golden geese and we aim to provide skippers with the gear they need to align their catches to the needs of the market.

(

Compatability

Marport's sensors have been designed from the outset to work seamlessly with other systems. We don't see why you should have to fit an entire system when a single component needs replacing, so our sensors dovetail with other manufacturers' sensor arrays and wheelhouse displays.



Markus Lifenet

- a leader in man overboard safety and rescue

With its origins in the port of Hafnarfjörður, Markus Lifenet's managing director, Petur Th. Petursson is justifiably proud of the company's achievements. Although it hasn't always been an easy ride, the company has grown steadily over the past decades. Today it has a staf of 12 and customers around the world.

He commented that the prospects for the company look good and Markus Lifenet certainly enjoys an added prominence since he was asked to lead the work in development of new ISO standard for Means to recover people from water, as follow up of the new SOLAS regulation III/17-1. This role brought a new focus to the company and its pioneering work. Petur Th. said that in compiling information and experience on the subject, during last 30 years, the emphasis has been placed on the human element and in particular on generating safety and rescue culture on board ships, as rescue at sea is not something to be taken lightly.

Simple and portable

It's not always abvious that someone preparing to enter into cold water to rescue a fellow crewman or person in need will always know just how to react to an emergency. Not everyone has the courage or the clarity of thought that this kind of operation requires, but our recovery systems and rescue technique have repeatedly proven its worth under harshest conditions. Most of them are portable and a simple piece of equipment, that has the added advantage of being relatively cheap and effective solution, compared to some products on the market. Most of our rescue nets are designed so that one crewman can deploy them in a matter of seconds and for two to four crewmen to lift the net and the victim on board. The net can also be used with a light crane boom.

Unwavering faith

It is now 35 years since skipper Markus B. Thorgeirsson began developing the prototype Markusnet, designed specifically as system to recover people. At the time the idea was seen as innovative while also being simple. Over the 35 years, the Markus Lifenet products have become an important part of the array of recovery equipment that commercial vessels carry, thanks to the pioneer's vision and confidence in their idea, as well as Petur's relentless drive to collect and distribute information on techniques and knowhow to recover people from water and floating objects last 30 years.

36





Markus Lifenet type MS

Instructions for use

Getting into the net









Other options

for use





Deploying the Lifenet



Undo the connecting line and the canister. Pick it up using the handle on the back and carry it to where it is needed. Grip the neck of the throwing bag and undo the securing link. Hold the edge of the net and drop the lifting lines into the water. As soon as the throwing line has been thrown upwind of the casualty, the net section should be allowed to drop into the water. Smartly pull in any slack in the connecting line and the lifting lines, and allow more slack as the casualty pulls the net towards him. **Maintain tension on the lines at all times.** Work with the swell to bring the casualty to the ship's side and then bring him on board.

Lloyd's Register / SOLAS type approval SAS S100166 Icelandic Maritime Administration approval 06.11.09.01

For further information, see www.markusnet.com

www.markusnet.com

Man overboard - we specialise in safety and rescue



Manufactor: Markus Lifenet Ehf. Breiðvangur 30, IS-220 Hafnarfirði - Iceland Tel. +354 565 1375 - Fax +354 565 1376 - markuslifenet@simnet.is

How small fishing vessels have become big in the last 30 years



The modern day "small fishing vessel" in Iceland. Just under 15 metres in length, almost 6 metres in beam and with a gross tonnage of 30GT, these vessels are gradually replacing traditional fishing vessels. The introduction of the ITQ (Individual Transferable Quota) system in 1984, has been a major force in the modernisation of the Icelandic fishing industry. While the number of fishing vessels fell sharply once quotas became transferable through a change in law in 1990, this progress has since stabilised.

At the end of 2013, a total of 1645 fishing vessels were registered in Iceland, of which only 135 had a gross tonnage (GT) of 100 or more. In a nutshell, the Icelandic fishing fleet is undergoing a polarisation into two dominant categories, vessels up to 30GT and vessels of 1000GT and greater.

Constant evolution

Once categorised as "small boats" the modern day version of these vessels has little resemblance to the definition used when the ITQ system was introduced in 1984. Through constant evolution by domestic shipbuilders these vessels are gradually replacing the traditional gill netters and longliners Icelanders have known for the last 60 years.

One of these new vessels was launched in the autumn. Operated by Stakkavik in the port of Grindavik, the 30GT Óli á Stað GK-99 measures 14.81 metres in length and 5.57 metres across the beam. The vessel's accommodation is roomy enough for a crew of eight although it is usually operated with half that number.

Highly efficient

Now with powerful engines and equipped with the best available technology, these modern vessels can brave tougher conditions than their predecessors. Highly efficient and with a relatively small crew operating on a sheltered deck, a vessel like Óli á Stað can catch in the region of 1300 tonnes a year within the specific small vessel ITQ system.

FleXicut

Automatic bone detection & removal for whitefish is now a reality.

- Improve yield reduce pinbone material & optimize fillet utilization
- Significantly increase throughput
- Reduce labor costs
- Produce a more diverse product range skin-on loins, smart fillets





The Iceland Responsible Fisheries Certification Model

A robust, common sense, practical and cost effective approach

The Iceland Responsible Fisheries certification model allows Icelandic fisheries to meet the FAO criteria for credible certification. This programme also utilizes a certifier who is accredited to the International Organization for Standardization (ISO) by an International Accreditation Forum (IAF) member. The result is a model that is practical, verifiable, transparent, and incorporates the criteria and procedures outlined in the FAO Code and Guidelines.



Seafood from Iceland for the benefit of future generations www.ResponsibleFisheries.is

The purpose of fisheries certification

The main purpose of the IRF certification programme is to preserve the fisheries management principles adopted by the international community, to document well managed Icelandic fisheries to the highest level of assurance, to promote community consensus behind good discipline in fisheries management and to offer our customers choice in certification. The certification confirms responsible fisheries management and good treatment of marine resources.



The recognised international standards

The Icelandic Responsible Fisheries Management (IRFM) Specification is a certification standard based on the 1995 FAO Code of Conduct for Responsible Fisheries and on the 2005/09 FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Marine Capture Fisheries. The Iceland Responsible Fisheries Foundation (IRFF) is the standard owner and the IRFF Technical Committee is responsible for writing, issuing and reviewing the IRFM standard.

The IRFM Specification has received full accreditation to the internationally recognised ISO/IEC 17065 Standard for certification of product, process and services schemes. The accreditation assessment was carried out by an IAF member, the Irish National Accreditation Board (INAB).

Third-party certification

Global Trust Certification Ltd., an SAI GLOBAL company, is independently managing the certification and assessment methodology that is used to assess and certify Icelandic fisheries. After certification is confirmed, the fishery enters a programme of annual surveillance assessments to maintain continuing certification, with re-certification required every five years.



Reliable Products Environmentally Responsible



Borgarplast hf • Voluteigur 31 • IS 270 Mosfellsbaer • Iceland • Tel. +354 561 2211 • Fax +354 561 4185 • borgarplast@borgarplast.is



Iceland's cool breeze blows through Barcelona



The President's address to the IESE business university was extremely well received.



The President took the opportunity to visit one of the La Sirena frozen goods outlets. He is seen here chatting to the company's managing director, and Dorrit Moussaief is between them.

There was a distinct fresh breeze blowing from Iceland at a presentation held recently at the Casa Llotja del Mar, the magnificent base of the Barcelona Chamber of Commerce. The presentation was part of a concerted drive that took place in the city throughout February, spearheaded by Promote Iceland and its partner organisations.

The key speaker at the Casa Llotja del Mar event was Iceland's President, and the meeting was also addressed by the chairman of the Barcelona Chamber of Commerce and the chairman of the Spanish-Icelandic Business Alliance. Delicacies made from Icelandic raw material were on offer at the event that focused on presenting Icelandic travel opportunities, saltfish (bacalao), innovation and literature.

Life is Saltfish in Spain

Seafood has long been Iceland's prime export to Spain, valued at ISK22 billion in 2014. Spain is Iceland's second most important export market for seafood, where saltfish or bacalao as it is called in Spanish is easily the most important product. The La Sirena frozen goods chain which emphasises high-quality produce

Visit our websites: www.responsiblefisheries.is

has been running a special sales effort for cod products in the run-up to Easter and gave the President a presentation of the array of goods that the chain has to offer.

Learning the lessons of the crash

As part of his visit to Spain, the President held a lecture for students at the IESE business university and traced the Icelandic experience of resurrecting its economy in the wake of the economic crash, receiving an ovation at the close of his speech. He also addressed a literature event, where Icelandic authors and translators presented Icelandic literature, and it is noticeable that a significant number of Icelandic books have been translated into Spanish.

The Iceland publicity drive has been a combined effort by Promote Iceland, the Icelandic Embassy in Paris which also has Spanish affairs as part of its remit, the Icelandic Consulate in Barcelona and the Spanish-Icelandic Business Alliance. Co-operation with the Barcelona Chamber of Commerce, the Barcelona Tourist Board and Spanish publishers was also excellent.



Iceland's President made a member of the Catalonia Saltfish Society

During his visit to Barcelona, the President was inducted as an honorary member of the Catalonia Saltfish Society. He visited the Santa Catalina market where several outlets sell Icelandic saltfish products, and the ceremony was held there.

Icelandic saltfish has a very special place in Catalonia, and exports of cod products to Spain grew between 2013 and 2014. Prices also increased after a low period. Icelandic producers also took part in the visit, taking the opportunity to visit clients in Spain.

In his address at Casa Llotja del Mar, the base of the Barcelona Chamber of Commerce, the President discussed the strong links that hold Iceland and Spain together through the saltfish trade. The meeting and the subsequent reception were attended by 250 guests.



The President proudly holds the medal that confers on him the title of 'Honorary Member of the Catalonia Saltfish Society.'







Industry changes unite federations

'In my view, the establishment of his new federation demonstrates the evolution of the industry from the days when the the Federation of Icelandic Fishing Vessel Owners and the Union of Fish Processing Companies were founded,' said Jens Gardar Helgason, the

•

new chairman of Fisheries Iceland, which was formally established at the end of last year. 'This new organisation not only absorbs the energies of the two older federations, but it is also being bolstered by companies without direct participation in fishing or processing joining. These include some of the larger marketing companies and I hope we can attract more companies from associated and service industries.'

High-tech business

He commented that today's fishing industry is a high-tech business that relies on top engineering and software. Alongside this is the research field, including life sciences that have laid the foundation for the creation of value from by-products.

INTERNATION DESCON

The newly elected chairman of Fisheries Iceland at the quayside in his home town of Eskifjördur. He also mentioned the work done by companies within the Iceland Ocean Cluster, which has become a melting pot for ideas. This is where experience meets young and ambitious people with new ideas, as well as product development and innovation.

The new chairman is a young man of forty and has been immersed in fishing since childhood. He lives in the east coast fishing port of Eskifjördur where the fishing industry has long been firmly established.

Flying the flag for marketing

He feels that the Icelandic flag should become a banner for marketing Icelandic products and pointed out that Norway has already used its national flag as a mark of quality. He also feels that a portion of the resource levy raised from fishing companies should be used for marketing Icelandic seafood products.

Jens Gardar Helgason feels there is a need to bring about changes to the debate about fisheries, which have been characterised by strife. 'Both those who work in the industry and the nation as a whole should be proud of the industry, simply because it's a world leader in its field.'

A few facts about Icelandic fisheries

The Icelandic fishing industry has undergone major changes during the last three decades following the introduction of the ITQ system. Here are a few interesting facts about the industry and its current state.

- In 2013 the total work force of the Icelandic fishing industry comprised 8600 people. While there were 3600 jobs at sea, some 5000 jobs were land-based.
- The Icelandic fishing fleet has seen a 15% decrease in numbers since the turn of the millennium.
- Incidentally, while the annual average total catch of cod has almost been halved during the last 30 years, the export value of the catch has risen by almost 140%.
- The total exports of Icelandic seafood products amounted to 786,000 tonnes in 2013.

- The overall export value of Icelandic seafood products has risen by some 30% during the last five years.
- In 2013, the quantity of Icelandic seafood exports to Russia surpassed exports to Norway and the UK for the first time.
- Europe is the primary market for Icelandic seafood. In 2013 European markets were the source of 80% of the value of the industry's exports. Asian markets account for 8% of the overall value, North America for 6% and Africa for 5%.
- Cod products make up almost a third of the total export value. The cod's 32% share in the total value is followed by capelin with 12%, herring with 9%, mackerel with 8% and redfish and haddock with 6% each.



Experience Iceland your way with Reykjavik Excursions

Reykjavik Excursions is one of the oldest travel companies in Iceland and offers over dozens of tours all year round. The tours range from a few hours to a whole day, from morning to evening so everyone can find a tour to their liking. The company prides itself on its long years of experience and professionalism. This is also true of their drivers and tour guides who make each tour special.

Flybus at your convenience

Additionally, Reykjavik Excursions operates the flybus which takes you to or from Keflavík International Airport. For a few extra krónas, you can be dropped off or picked up at your hotel.

One of the most popular Reykjavík Excursions tours is the Golden Circle tour. You can choose either a whole day or a half-day tour. On the tour, you will get to see Þingvellir, Gullfoss and the geothermal valley of Geysir in Haukadalur. Þingvellir is one of the most historical sites in the country. It lies in a rift valley that marks the crest of the Mid-Atlantic Ridge. The waterfall Gullfoss gets its water from Hvítá, which origins lie in Langjökull glacier and falls down into a deep canyon. Geysir geothermal valley is named after the famous geyser which is now dormant. A smaller geyser, called Strokkur, erupts every eight minutes and is a sight to see.

Northern lights show

One of the biggest attractions during the winter are the northern lights which often look like they are putting on a show for your pleasure. Our Warm Baths and Cool Lights tour takes you to Laugarvatn Fontana where you can soak in the hot pools outside and steam baths which have been enjoyed by the locals for hundreds of years. Afterwards, you will go and hunt down the northern lights. Other northern lights tours include a horse theatre or trips to Langjökull glacier. Apart from that it is possible to choose the original Northern Lights tour where you are driven to an undisclosed destination in a hunt for the lights. Reykjavik Excursions offers hotel pick-ups and drop-offs with every tour.

Whatever the season, there is always something to see and do in Iceland, and with Reykjavik Excursions your experience will be one to remember.

Visit our website: www.re.is



46

Fishermen Don't Listen to Nonsense





They just want trusty, reliable tubs that help maximise catch value. For 30 years Sæplast tubs have been designed to meet the toughest demands of no-nonsense fishermen.



> Together we make things happen

Samskip is one of the larger global logistics companies in Europe with offices in 24 countries employing 1,300 people around the world. Particular focus is on cost efficiency, sustainability and environmentally friendly transport.

